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Ergativity and inchoativity: an aspect-syntax interface.

1. The problem:
Event structure

The observation that, for a subclass of the intransitive verbs, the subject should be defined by structural properties of direct, or thematic, object (Burzio 1986) has not only led to the fruitful notion of syntactic ergativity, but it has also helped to motivate the distinction of an underlying descriptive structure, which is closer to the organization of the lexicon and a derived structure with overt properties. In the literature on English, ergativity is crucially a lexical property characterizing the simple verb (Keyser/Roeper 1984). This perspective has come to be shared by authors writing on other languages as well (Burzio 1981/1986 on Italian; Haider 1985 on German; Hoekstra 1984 on Dutch; den Besten 1985 on Dutch and German, Levin 1989 on Basque; to name but a few).

The notion, however, that ergativity is a typical property of the verb above is not true cross-linguistically. As has been observed repeatedly by Abraham (1985,1986, 1989). German verbs of movement (move-V, henceforth) acquire all distributional properties of ergatives as soon as they are modified by directional adverbs. See (1)-(2). Note that under adverbial modification through stative locals as in (a), the intransitive, non-ergative status of move-V is preserved. iV = intransitive verb; eV = ergative verb; tV = transitive verb.) (3=dative case, 4=accusative case)

A.   AUX-property (ergatives select sein only)
(1)a Die Kinder   haben/sind lange im(3) Garten   gelaufen
     The children have/are   long within the garden run
     "The children ran around in the garden for a long time"
   b Die Kinder   *haben/sind in den(4) Garten gelaufen
     The children are   into the garden run
     "The children ran into the garden"
B.   attribute property (only ergatives pattern as participial prenominal attributs)
(2)a die im(3) Garten   gelaufenen Kinder
     the (within) the garden run   children
   b die in den(4) Garten gelaufenen Kinder
     the into the garden run   children

For the motivation of these and other distributional tests in German see Abraham (1985, 1986, 1988). The complementary distributional phenomena in (1)-(2) leave no doubt that ergativity is also a constructional property.

This compositional property of ergativity receives further support on the derivational level. In German, there is a clearly delimitable set of verbal prefixes with ergativizing force. See the prefix-ergative verbs in (3b) below as opposed to the intransitives in (3a). (Caps denote main lexical stress.) Note that the verbal prefix is separable, and thus gets stranded, in finite verb-second structures in German.

(3)a   (3)b
blühen   "bloom"   AUFblühen   "bloom up"
gehen   "walk"   UNTERgehen   "submerge"

schweben	"float"	AUFWÄRTSschweben	"float upwards"
treiben	"float"	(HIN)ABtreiben	"float down"
schlafen	"sleep"	EINschlafen	"fall asleep"
schwinden	"fade away"	entschwinden	"disappear"

In fact, German has a very productive means of ergativizing intransitives by way of "small-clause affixoidation". See (4b) for a number of such ergative examples as opposed to the intransitives in b.

(4a)   (4b)
FESTsitzen "sit tight"   sitzen "sit"
BRACHliegen "lie barren"   liegen "lie"
MÜDEklettern "climb tired"   klettern "climb"
WUNDreden "talk until sore"   reden "talk"

(3) as well as (4) comply with the ergative tests put forward in (1) and (2). In addition, they display the linear ergative property in (5a) as opposed to (b). See Haider 1985.

   (5) VP-topicalization
       a   [Rosen aufgeblüht/Ballone aufwärtsgeschwebt/Kinder eingeschlafen] sind hier noch nie so frühzeitig.
           Roses bloomed up/balloons floated upwards/children fallen asleep are here still never so early
       b */?? Rosen geblüht/Ballone geschwebt/Kinder geschlafen haben hier noch nie
           roses bloomed/balloons floated/children slept have here still never

The explanatory idea behind the distribution in (5a-b) is that only the ergative subject (as an underlying direct object) can move to a topicalized position along with the verb (VP-topicalization), whereas intransitive subjects (underlying external arguments) cannot.

    The conclusion must be that both the constructional and the derivational ergative type require an analysis which is in line with Burzio's underlying θ-role assumption and which will be subject to one common account on the syntactic level and on the level of word-formation syntax. In other words, what we want is a type of description accounting for the unified ergative property irrespective of the surface distinctions. We will see that such a unified account can be reached in terms of event structure.
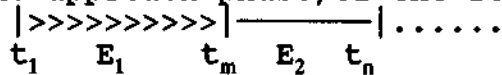
2. The semantics of event structure
The key to the quest for the unified account of lexical, syntactic, and derivational ergativity is the observation well-known to traditional grammarians of German, which, however, as far as I can see, has gone totally unnoticed in generative linguistics, namely that there is unexceptional coocurrence between ergative structures and terminativity, or inchoativity (in- or egressiveness).

      My claim is that the Aktionsart distinction of [α terminativity] is a useful motivanent for structuring the verbal lexicon and for deriving important generalizations. Verbs of the [+terminative] class include Vendler's (1967) accomplishment and achievement verbs; they include in any case class of intransitive terminative verbs (the meanwhile classical "ergative verbs" following Burzio's (1981, 1986) characterization and terminology).

    Terminatives structure events as bi-phasic, whereas non-terminatives (duratives, frequentatives, statals) are monophasic. See (6) for the respective graphics.

(6) terminatives or bi-phasics (both transitives and intransitives):

t_x ... point of reference in the event; E_1/E_2 ... event of the approach phase/of the resulting state

|>>>>>>>>>>|—————|......
t_1 E_1 t_m E_2 t_n

(7)a non-terminatives (mono-phasic):

≈≈|≈≈≈≈≈≈≈≈≈|≈≈≈≈≈≈| for activities or iteratives
t_1 E t_m t_n

  b   —|—————————|—————| for statals
    t_1 E t_m t_n

Terminatives include transitives as well as ergatives. According to the Aktionsart characterization, ergatives (of any of the three syntactic types sketched above) are thus inchoative intransitives.

In what follows I pursue the question how the Aktionsart, or event-phasic, classification can be related to the argument structure of verbals.

3. An interface between syntax and semantics: argument structure and phasic semantics.

The denotation of verbs exists by virtue of the thematic characterization of the verbal arguments. One can mirror this relation in terms of the following quasi-lambda notation of the predicate structure:

(8) ‖extract‖ = eA(extract-event) ∩ iA(extract-event)

The external argument (eA) and the internal argument (iA) characterize the <u>extract</u>-event in terms of their thematic roles, AGENT and THEME, respectively: eA is the extractor, or the one who, or which, brings about the extract-event; and iA is the extracted, or the one who, or which, undergoes the extract-event. It can readily be seen that the eA as AG is more detached from the extract-event than the iA as the event-undergoing TH. The characterizing content in terms of the event structure is more or less "iA (= TH) is extracted" regardless of who or what brings the extract-event about. eA as AG appears to play a role only to the extent that its role in initiating and controlling the extract-event is <u>**still**</u> activated or **not** activated <u>**any longer**</u>, but is implied as activated in the past (anterior). In the case that AG is still activated we will speak either of the active meaning or of the (ongoing) passive of the sentence. In the case that AG is no longer active, but only the result of the process-phase is denoted, we shall speak of a statal (or adjectival) passive. Note that German is among the languages that distinguish overtly and minutely between the two passives by way of distinct AUX(iliarie)s as opposed, for example, to English): the event passive (G. <u>Vorgangspassiv</u>) selects only the auxiliary <u>werden</u> and can collocate with the AG-adjunct (the demoted lexical subject); the statal passive (<u>Zustandspassiv</u>), on the other hand, never permits collocation with the former AG-eA
If this characterization of the mapping of the eA and iA on the event-structure of the predicate is correct the following distinctions become available. Note that t_m belongs to phase 1 as well as the ensuing result state, phase 2.

(9)a [+term]tV:
    |>>>>>>>>>>|—————————|
    t^1 E_1 t_m E_2 t_n

example: <u>destroy</u>
event identification:
iA(t_1)∩ ...∩ ...∩ iA(t_m)
where: t_1-t_m = approach phase,

and t_m-t_n =resulting state

b [+term]iV (=eV):
```
|>>>>>>>>|——————|
t₁   E₁   t_m    E₂    t_n
          iA      iA
```
example: <u>die</u>
event identifications:
$iA(t_1) \cap ... \cap ... \cap iA(t_m)$,
where $t_m(E_1) = t_1(E_1)$ as well
as $t_m(E_2) = t_n(E_2)$ and $t_1(E_1)$
$\neq t_n(E_2)$

(10)a [-term]tV:
```
≈≈|≈≈≈≈≈≈≈|≈≈≈≈≈≈≈|
t₁    E    t_m   E    t_n
```
example: <u>carry</u>

b [-term]iV:
```
≈≈|≈≈≈≈≈≈≈|≈≈≈≈≈≈≈|
t₁    E    t_m   E    t_n
```
example: <u>walk</u>

Note that, while t_m is an element belonging to either phase in (9a,b) such that the event characteristics is $t_1(E_1)$ =/ $t_m(E_2)$ in case of terminatives (since E_1 =($t_1(E)$ = $t_m(E)$ in (10a,b) in the case of duratives (since there is only one event reference, E).

These distinctions carry over nicely to a number of other linguistic phenomena. See the event structures for the auxiliaries <u>have been</u> and <u>was</u> in (11) below.

(11)a <u>have been</u>+PPP
```
|>>>>>>>>>|——————|
t₁    eA    t_m   eA    t_n
```
PPP= Past Passive Participle
event identification:
$eA(t_1) ... \cap (eA)(t_m) \cap ... \cap eA(t_n)$, where $t_1(E_1) = t_m(E^1)$
as well as $t_m(E_2) = t_n(E_2)$ and
$t_1(E_1)$ =/ $t_n(E_2)$

b <u>was</u> + PPP
```
|≈≈|≈≈≈≈≈≈≈≈|≈≈≈|
t₁    eA    t_m   t_n
```
event identification:
$eA(t_1) \cap ... \cap eA(t_m)$
where $t_1(E) = t_m(E)$

The identification of the Aktionsart structure through the temporal-aspectual auxiliaries <u>have been</u> and <u>was</u> is idiosyncratic in English. German, for example, does not share this auxiliary distinction. In other words, any distinction in terms of terminativity is identified by the verb (and its objects and/or adjuncts) alone. The restrictions obtaining for the use of the English present perfect and the preterite are thus accounted for by the fact that the aspectual structures of the AUX and the main verb may clash in this mapping mechanics for the composite meaning.

It has always been a neglected question what unites the preterite participle with the passive participle beyond the common form, and what distinguishes them, notably where no distinct auxiliary selection can tell them apart, i.e. in prenominal position (attributive function). The event structure provides a ready answer. See (12) for German prenominal preterite participle attributes.

(12)a <u>gestorben</u> "died" = active past participle (APP)
```
|>>>>>>>>>|——————|--------|
t₁    E₁   t_m   E₂    t_n         S
```
event identification: $eA(t_m) \cap eA(t_n)$,
where $t_m(E_2) = t_n(E_2)$ as well as well as $t_m(E_1) = t_1(E_1)$

b   <u>herausgezogen</u> "extracted" = passive past particple (PPP)

```
|>>>>>>>>>|————————|————————|
t₁    E₁    t_m    E₂    t_n        S
```

event identification: $iA(t_m) \cap ... \cap iA(t_n)$
where $t_m(E_2) = t_n(E_2)$ as well as $t_m(E_1) = t_1(E_1)$

Both <u>sterben</u> "die" and <u>herausziehen</u> "pull out extract" are terminatives. Their past (= anterior) participles designate the result phase (t_x: $m \le x \le n$ $t_m - t_n$), irrespective of the active or passive voice. In other words, in order to distinguish between the PPP (the passive) and the APP (the active perfect) one must invoke the environment of the participial morpheme to decide between the two basic readings. Note that two different readings under one single, identical form are assumed, with one of the two the antheriority reference, as a default meaning to be invoked automatically.

Now let us look at non-terminatives.

(13)a   <u>geschwommen</u> "swum" = APP
         t^s ...(Reichenbach's point of time of the speech act

```
      ┌──────┐
|≈≈≈≈≈≈≈|≈≈≈≈|——————|
t₁    E    t_m  E  t_n        S
```

event identification: $eA(t_1) \cap eA(t_m) \cap eA(S)$

b   <u>getragen</u> "carried" = PPP

```
      ┌──────┐
|≈≈≈≈≈≈≈|≈≈≈≈|————|
t₁    E    t_m    t_n    S
```

event identification: $iA(t_1) \cap iA(t_m) \cap iA(S)$

In either case, (13a) and (13b), t1 and t_n on the time axis are in an anterior relation with respect to the speech act time, ts are E The respective event identification structures indicate both the differences and the common properties of PPP and APP, either terminative or non-terminative. Compare (12a,b) and (13a,b). Either event structure relates S to an anterior event time point, t_m, albeit in different ways: in the case of the terminatives it relates $\underline{t_m}$ both to the properties of the set represented also both by t_1 and by $\underline{t_n}$; see (12a,b). In the case of the non-terminatives, however, $\underline{t_m}$ is not a "hybrid" since there is only one, homogeneous event property, E, for any point at the event time axis. Note that these properties are distinct yeilding only one point, $\underline{t_m}$, on the event time axis to share either property.

Since tenses are extensively expressed by periphrastic forms in English and German let us see to which extent auxiliaries and modals possess event structure in their own right. I will restrict myself to German examples. Compare also the English auxiliaries in (11a,b) above.

(14)a   <u>ist/sind</u> "is/are"

```
|————————|————————|
t₁       t_m      t_n
```

state identification: $eA(t_m)$

b   <u>war(en)</u> = <u>ist/sind gewesen</u> "was/were"

```
     ┌─────┐
|————————|————|————|
t₁    t_m   t_n   t_s
```

state identification: $A(t_m) \cap \neg A(s)$

c   <u>wird/werden</u> "become(s)"
```
|----|----|>>>>>|-------|
S       t₁ E₁ tₘ  E₂  tₙ
```
event identification: $A(t_1) \cap A(t_m)$
where $t_m(E_1) = t_1(E_1)$ as well as
$t_m(E_2) = t_n(E_2)$ and
$t_1(E_1) =/ t_n(E_2)$

The event structure of <u>werden</u> in (14c) accounts for its termin-
ative, or inchoative, denotation.

(14)d   <u>hat/haben</u> "has/have"
```
----|----
    tₘ
```
state identification: $eA(t_m)$

<u>hat/haben</u> is state-identified in (14d) not as a two-place verb in
the sense of "possess", but in the sense of "prevail; hold", the
meaning it has in periphrastic temporal/aspectual constructions.
   Modal verbs project event structures distinguishing between
deontic and valitive, respectively, and epistemic readings
(including <u>can</u>).

(15)a   <u>sollen/müssen/dürfen/wollen</u> "shall/must/may/will"
```
|--------|≈≈≈≈≈|≈≈≈≈≈|
S       t1  E tₘ E tₙ
```
event identification: $\neg A(S) \cap A(t_m)$ (irrespective of whether
the deontic/valitive modal projects an argument of its own,
or whether the argument, A, is raised along with the
infinitival verb; see Vikner 1988).

   b   <u>sollen/müssen/dürfte/mögen/können</u> in their epistemic
       readings: have the same event identifications as <u>be</u> in
       (14a).

The distinct event structures of deontic/valitive and epistemic
modals correlate in a striking way with some complementary
distributional properties (see Abraham 1989 for further details).
   It is to be kept in mind that the event meanings involving modals
have default values. In other words, where particular forms are am-
biguous between different event structures those sketched in (14)
will be chosen unless other selections are induced. For example,
the preterite participle of terminative transitive verbs is
ambiguous between the passive and the active depending on which AUX
it is used with: PP + <u>sein/werden</u> "be/become" > PPP (passive
preterite participle), PP + <u>haben</u> "have" > APP (active preterite
participle). But, clearly, when used without an AUX, as in
prenominal attributive function, what is deleted is <u>sein</u>, but not
<u>haben</u>. Thus, the PPP-**function** is taken to be the default reading of
the homonymous form.

4. <u>The Grimshaw-Vikner account</u>
Our proposal to distinguish two different phases in the event
structure of the verb, and to map the θ-roles of eA and iA onto
these phases for aspectual identification of the event, is rem-
iniscent of the account offered by Grimshaw and Vikner (G/V 1989).
The observations inducing the G/V account is the distribution
displayed in (16) (G/V 1989: 5; their example (13a-c); the
opposition displayed in (17) has not been pointed out in G/V).

(16)a *This film was developed
     b This film was developed <u>in Geneva/by Fred/on Tuesday/,too
        quickly</u>
     c This film <u>has been</u> developed
     d This film was <u>destroyed</u>
(17)a The example was constructed *(by two linguists/yesterday)
     b *The example has been constructed (yesterday)
     c *The dress was/has been designed - *the designed dress
     d The dress was/has been designed cleverly - the cleverly
        designed dress

G/V's question is why it is that adjuncts (not just the agentive-PP) are omissible when used in construction with the present perfect, as in (16c), but why it cannot be dispensed with in the preterite, cf. (16a) and (16b). As (77) attests the adjunct selection does not merely follow the distribution between the present perfect and the preterite.

G/V's search for an account of this distribution is guided by Pustejowsky's (1988) approach to event structure. G/V assume that accomplishment events are bi-phasic (activity + state) and that verbal arguments map on the two-phase events in one of the two following fashions.

(18)a   event   b)   event
          ┌───────┴───────┐   ┌───────┴───────┐
        activity   state   activity   state
        eA,iA   iA   eA   iA
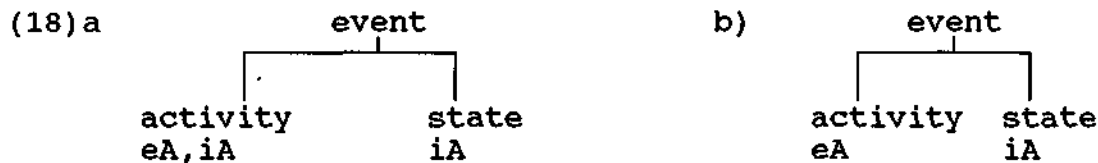
Note that the iA identifies either phase in (18a), whereas in (18b) its identifying force is restricted to the state phase. G/V (1989) assume further that any propositional content must identify either event phase by virtue of argument assignment (mapping). Since the passive has full propositional content, but assigns no argument status to the demoted eA, the structural identification has to be provided by the single argument remaining under passivization, iA. Where iA serves to identify either phase, as in (18a), passives with one argument are possible; see (16d) for this type of the accomplishment verbs. However, in (18a) the activity phase of the event structure lacks an identifier in the passive. To make up for this gap in the identifying grid adjunct modifications as in (16b) and (17a) have to be filled in. This, according to G/V (1989), explains the distributional facts displayed in (16a-d) as well as those in (17a-d). For example, <u>design</u>, in (17e,d) belongs to the class of accomplishments, which provide the iA only for the identification of the second, statal, phase leaving unidentified, in terms of argument, mapping the activity phase. This identifying task is taken over, according to G/V (1989), by adjuncts (among them, as (16b) and (17a) show, by the agentive-PP).

Note, however, that it remains unclear how this identification of the activity is brought about by adjunct modifications such as locatives (<u>in Geneva</u>), temporals (<u>yesterday</u>), or reason adverbials (<u>for a good reason</u>). Note, furthermore, that in order to account for similar distributions observed to hold for <u>verba sentiendi</u> and psych-verbs, G/V (1989:6) have to assume bi-phasic statal events for verbs such as <u>believe</u> and <u>hold a position</u>.

(19)a   state

        state$_1$ state$_2$
        eA   iA
    b   *This position is held/believed
    c   This position is <widely> held/believed <all over the world>

State$_1$ is thus said to be identifiable only in the case that adjuncts serve to attain this structural requirement. But this assumption is counter-intuitive. The **believe**-event does not lend itself to the discrimination of two states or event phases. Note, in this context, that it is crucial to arrive at phasic distinctions on grounds which are not induced by the need to map eA and iA onto distinct event phases. Obviously, to postulate a biphasic event structure in order to satisfy a verbal two-place argument grid amounts to circular reasoning.

5.   **Cross-linguistic observations: the obligatory adjunct effect.**

The main obstacle, however, that G/V's assumption has to cope with is the fact that the restrictions on passive propositions and prenominal passive participles in German are of a crucially nature different from those that they present for English. Note that G/V's appeal to the event structure of lexicals as an account for the observed grammatical distributions must be meant to hold cross-linguistically and consequently presupposes a large degree of overlap between the aspectual verb classes in English and German and, consequently, a largely identical argument mapping mechanism. In other words, one expects distributional facts based on lexico-semantic classification to turn out largely identical cross-linguistically. This expectation, however, is not born out when we look at the linguistic material in German. It is not necessary to go into full detail; any German structure corresponding to G/V's "ungrammatical" examples (including (16a) and (17a,c) quoted above) is grammatical. The only requirement would be a proper context which guarantees a sensical reading. What follows is a random selection of examples that appear to be weighty enough as disclaimers to the general account suggested by G/V (1989).

("≠" ... different grammaticality)
(20)a   *The/A picture was drawn (G/V 5b) ≠ Das Bild wurde gemalt.
    b   *The/An example was constructed (G/V 5b) ≠ Das Beispiel wurde konstruiert/aufgestellt.
    c   *The/A film was developed (G/V 5c) ≠ Der Film wurde entwickelt.

According to G/V (1989: 3), verbs of this class (<u>draw, construct, develop</u>), albeit accomplishments, cannot form passives unless the activity phase is identified by adequate adjuncts. The lexically motivated event structure of this accomplishment class is that of (18b), according to G/V.

   Now see the contrapositioned force to G/V's account, posed by the following examples in German. The verbs in (21) should permit passives devoid of adjunct support, since the identification of the activity phase is warranted in accordance with (18a).

(21)a   The/A boat was destroyed ≠ Das/*Ein Boot wurde zerstört
    b   The conversation was recorded ≠ Die/*Eine Konversation wurde aufgenommen.

Nothing in the account provided by G/V (1989: 1) prevents the German passives with indefinite (promoted) subjects. This suggests that different mechanisms should be looked for to account for G/V's observed grammatical distributions. Note, first, that the German passives with a indefinite subject-NP are grammatical under two conditions, (22a) and (22b) (see Abraham 1988).

(22)a   Es wurde   ein Boot zerstört
        it became a   boat destroyed
        Es wurde   eine Konversation aufgenommen
        it became a   conversation recorded
    b   Ein BOOT/Das Boot wurde zerstört   (capitals signalling contrastive (= non-default) sentential accent)
        Eine KONVERSATION/Die Konversation wurde aufgenommen
    c   *Eine Konversation wurde aufgenommen
    d   *Ein Boot wurde zerstört

This suggests a totally different account, to which we shall come back presently (see, in greater detail, Abraham 1988). Suffice it to say that definitess and focus effects like those in (22b) have not been given consideration by G/V (1989), let alone an account of them.
    The remainder of our examples also disconfirms the cross-linguistic valitity of G/V's findings. See (23).

(23)a   *John was admired (G/V 18a) ≠/ Hans <u>wurde</u> bewundert (process)
                                  *Hans <u>war</u> bewundert   (state)
    b   ?the destroyed house (G/V 23) ≠ das zerstörte Haus
    c   ?/* a loved man   = / ein geliebter Mann
    d   *the killed chicken ≠/ das geschlachtete Huhn

Our conclusion is that there is no such general effect as G/V's obligatory adjunct effect and that the account suggested by G/V (1989a,b) to cover data in English and partly also Danish cannot be corroborated by extended cross-linguistic observations.

6.   <u>What is really amenable to an account in terms of event structure</u>?
The gist of this section is to present, on the one hand, what will be amenable to an acccount in terms of event structure and the argument projection onto it. Given the framework of G/V (1989) we shall occasionally point out what has nothing to do with it. It is to be remembered at this point that the phenomena in question all share, at least superficially and in some way or other, the adjunct restrictions observed by G/V (1989). In particular, it will be shown what property of the adjunct specifically induces the restrictions observed. We shall discuss six distinct types of data: (1) verbal affixes and their role in event structure; (2) directional vs. locative stative adverbials; (3) statal (or adjectival) passive vs. process passive; (4) the distribution of grammatical (default) accent and its relation to contrastive accent within NP and S; (5) definiteness effects and object-incorporation; and (6) the status of the direct object with semantically weak verbs.

6.1.   <u>Verbal affixes and their role in event structure</u>
In Abraham (1986) evidence has been presented in some detail that

in German a class of verbal affixes (most of which carrying main word stress) has an "ergativizing" effect (in Burzio's sense). In other words, prefigating a simple verb with a member from the set of ergativizing affixes will bring about ergative properties for the derived verb. In terms of event structure, what such a specific affix causes is bi-phasic terminativity. It adds an approach phase, thus reinterpreting the original single phase of the non-terminative verb as a resulting state; see (3a) above. Suffice it here to run through the list of ergative affixes and attach them to just one simple verb, the intransitive movement verb <u>laufen</u> "run". The following list of derived verbs shares all distributional assets of ergative verbs:
<u>(her/hin)ab-</u>, <u>her/hin)auf</u>, <u>(her/hin)ein</u>, <u>(her/hin)aus-</u>, <u>(her/hin)über-</u>, <u>entgegen-</u>, <u>ent</u>, <u>(hin)durch-</u>, <u>zu-</u>. Note that all of these prefixes have either a directional or else finalizing locative meaning, one which the basic verb <u>laufen</u> (just as well as <u>run</u>) does not share.

Prefixes which have no such clearly delimiting and result-producing meaning do not yield ergative verbs; cf. <u>ver-</u>, <u>vor-</u>, <u>zu-</u> <u>rück</u>, at least in combination with <u>laufen</u>.

6.2. <u>Directional vs. stative or PPs</u>

Other than stative locative or prepositional phrases for which the original distributional grid of intransitive movement verbs is preserved, directional adjuncts or prepositional phrases (both locative and temporal) create ergative constituents. See the following opposition next to that in (24a,b). (3...dative case, 4...accusative.)

(24) a *<u>die im   Saal (·drin) getanzten Mädchen</u> ≠ <u>die in den</u>
      the in the-3 hall within danced   girls   the into-4 the
      <u>Saal (hinein) getanzten Mädchen</u>
      hall   into   danced   girls

   b ·<u>der unter Wasser—geschwommene Hans</u> ≠ <u>der durch</u>
      the under water-3   swum   John   the through
      <u>den Tunnel (hin)durch geschwommene Hans</u>.
      the-4 tunnel   swum   John

   c ·<u>der auf dem Baum gekletterte Junge</u> ≠ <u>der auf den Baum</u>
      the on the-3 tree climbed   boy   the onto the-4 tree
      <u>(hinauf) gekletterte Junge</u>.
      up   climbed   boy

   d ·<u>der in   2,5 Stunden gelaufene Läufer</u> ≠ <u>der die</u>
      the within 2,5 hours-3 run   runner   the the
      <u>erforderlichen 2,5 Stunden gelaufene Läufer</u>.
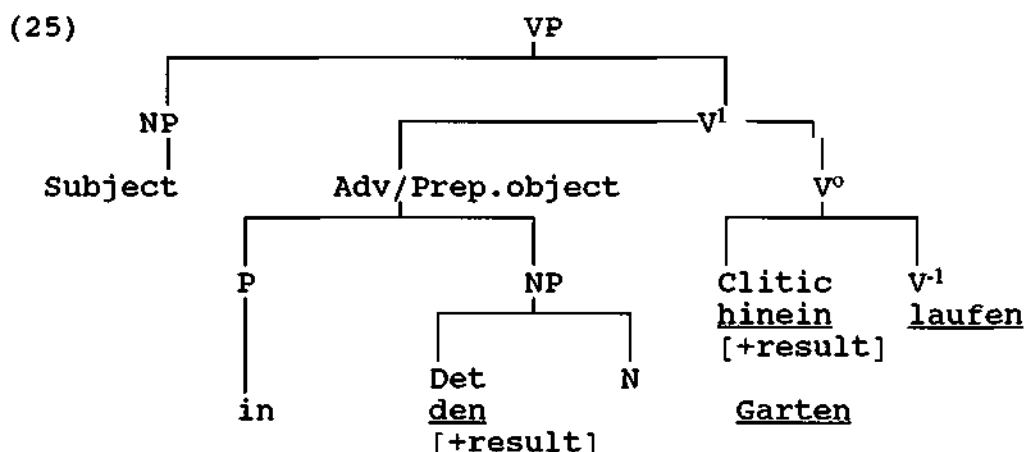   necessary-4   2,5 hours   run   runner.

The transfer from iV to eV within the class of movement verbs is signalled morphologically by the transfer from the statal dative 3 (3), to the directional accusative. (4).
Movement verbs with adjunct constituents in the statal dative are non-terminative, whereas the directional accusative constituent (often governed by the very same preposition; see (24a,c), as well as (2a,b) inducing an approach-implying result phase emerging from an previous durative, mono-phasic event.

Results are statal, but presuppose an anterior (approach) phase, as opposed to unstructured states or non-vectorial events without an ensuing resulting state. It is crucial to see that state of a terminative event can never be the recipient of the thematic AGENT-projection; rather, it can only host the one remaining, non-AGENT θ-role (most frequently TH). The incompatibility of the AGENT-role

and the resulting phase is, to all appearance, the aspectual reason for the assignment of iA (the internal structural D-argument) to the only argumental so-position with ergative verbs (eV).

What remains to be discussed is the structural position for the aspectual information of ergativeness. What we would want, furthermore, is a unified account for the ergative effect of ergative affixes (see 6.1.) and ergative PPs. Consider, in this context, the distribution of the adverbial copies of the prepositions in (24a-c): they are licitin construction with the directional accusative, but illicit with the statal dative. In line with the ergative affixes in 6.1., the assumption is legitimate that an aspectual clitic to V° hosts the lexical information of ergativity. Such, and only such, information may be copied to a PP-position within VP. It must, however, remain identifiable as an ergative by means of the accusative. Any other case will not relate to the ergative clitic and will therefore not be identified as copying ergative (= resultative) information from a lower sister to V°.

(25)

```
                              VP
          ┌────────────────────┼──────────────┐
          │                    │              │
          NP            ┌───────────────V¹───┐
          │             │                    │
       Subject     Adv/Prep.object           V°
                    ┌────────┴────┐      ┌─────┴─────┐
                    P            NP    Clitic       V⁻¹
                    │         ┌───┴───┐ hinein      laufen
                    │        Det      N [+result]
                    in       den
                          [+result]              Garten
```

By way of convention, the feature [+result] on PO triggers the accusative to be realized on the P-governed NP. If, in the case of the statal dative adjunct, we assume a structural node outside the maximal VP-projection, the mechanism sketched above follows automatically: no feature can be processed across VP, and, consequently, the canonic accusative-resultative trigger is blocked.

Let us now turn to the next type of facts.

3.   Statal or adjectival passive vs. process passive.
The statal passive in German is unequivocally signalled by the AUX sein "be", as opposed to the process-passive AUX, werden, "become". The statal passive principally disallows the AGENT-PP with the canonical structural AG-prepositions von und durch "by (from)". This receives a natural account on the basis of the event structure for statal passives, or adjectives, as in (12b) and (13b), as well as that for sein "be" in (14a.b). The state structure of (14a) is compatible with (12b) only if the link with the process (approach) phase, $(t_1 - t_m) = E_1$, is erased. This in turn disallows reference to the AGENT-argument by way of the structural passive prepositions von or durch ("by").

On the other hand, it is obvious why either terminative verb, the one-place eV or the two-place tV, permits a statal passive: all there is to do is cut the link to the process (approach) phase (formally, by deleting the condition $t_m(E_2) = t_1(E_1)$ in the event identification). It is typical of adjectives that they represent states without implying an anterior approach phase.

Why is it that non-terminatives cannot form statal passives in German? Consider (26).

(26)a <u>Der Sack wird/</u> *<u>ist getragen</u> .... non-terminative tV
the bag becomes is carried

   b <u>Es wird/</u>*<u>ist fleißig getanzt</u> .... impersonal non-terminative "passive"
it becomes/is a lot danced

   c <u>Es wird/</u>*<u>ist durch den Tunnel geschwommen</u> ... imperson-
it becomes/is through the tunnel swum al terminative "passive"

It is easy to account for (26a) and (26b). However, presupposes a statal event structure. See (14) there is simply no state phase in the event structure of non-terminatives such as <u>tragen</u> "carry" and <u>tanzen</u> "dance". Compare (10a,b). (26c), however, seems to be tricky. Note that the result phase induced by the telic, delimiting accusative would permit the prediction that the state "passive" is possible. However, it is not.

The solution lies in the required reinterpretation of what have been called "impersonal passives" in (26b) and (26c). Note, in the first place, that impersonal passives are not really passives, by any standard assumption holding for true passives (notably promotion of the basic direct object NPs: there is no direct object to promote to the passive subject function such that the event is predicable of such a subject-NP). The event characteristic in terms of approach and/or state phase can thus not be mapped on an NP. <u>es</u> is an expletive constrained to the topic node. No such expletive surfaces as soon as this topic node is filled by any other sentential element such as adjuncts (manner, temporal, or local). In other words, no mapping mechanism of argument identification within the event structure can be invoked, in the absence of an external argument NP. Compare (9) and (11) above, for example.

The lesson to be learned from this is that one should not be deceived by the event structure in terms of the Aktionsart phases alone, i.e. without the identification of the event structures in terms of argument mapping. Consider the citation infinitivals in (27) below, which would exclude <u>ist getragen</u> and <u>ist fleißig getanzt</u> in (26a,b), leaving intact, however, (26c).

(27) a   getragen <u>werden/</u>*<u>sein</u>
      b   getanzt *<u>werden/</u>*<u>sein/haben</u>
      c   durch den Tunnel geschwommen <u>sein/</u>*<u>werden/</u>*<u>haben</u>

Compare the respective forms in (27a-c) and (26a-c). The citational infinitivals invoke default readings with an external argument identification. Since no such argument referent is available in impersonals such as (26a-c) except for the demoted basic external argument (implied subject), and, further, given our assumption that the eA is of lesser importance for the event characterization in terms of argument identification (mapping only on the first structural event phase, whereas the iA maps on both phases), the ungrammaticality in (26a-c) receives different accounts: (26a) is out because there is no result phase in the Aktionsart semantics of <u>(ge)tragen</u>, while <u>sein</u> would require one; the ungrammaticalities in (26c) stems from the fact that <u>ist durch den Tunnel geschwommen</u> requires argument identification of its state phase, which is not possible in the absence of a referential subject NP. The ungrammaticality in (26b), finally, can be accounted for both in terms of

the Aktionsart constraint and the argument identification require-
ment. This, then, is the explanation why "statal passives" of
(constructional) ergatives receive no reading. Note that, by
contrast to _sein_, _werden_ - which is an AUX in any participial
construction, at least by default - induces an identification only
of the approach phase, the statal phase being only implied by
virtue of the Aktionsart characteristic of terminative verbs. Thus,
werden always selects one phase only thereby qualifying for a
durative reading. This is why the impersonal constructions in (26a-
c) with _werden_ are grammatical. The argument identification is
provided by the demoted external argument, the θ-features of which
are standardly assumed to be identifiable by the passive morpheme.
   It should be noted that the clear distribution of _werden_ vs. _sein_
in impersonal "passives" (see (26a-c) above) is itself proof of the
validity of our assumption that eA identifies only one of the event
phases, which, in the case of the two-phase grid with terminatives
(and root modals; see Abraham 1989), is constrained to the first,
approach, phase. This runs counter to the rather intuitive assump-
tions developed by Pustejovsky (1988) and G/V (1989).

6.4. The status of the direct object and semantically weak ("re-lational") verbs.

As G/V (1989: 3) have correctly observed there is a wide class of
"constructive accomplishment" verbs disallowing passives without
semantically adequate adverbial modifications. These are their
examples (G/V nos. (5a-c)), among others.

(28)a *The house was built/assigned/erected/constructed
    b *the built/designed/constructed house
(29)a The house was built yesterday/in ten days/in the south
   b the newly/recently/built//badly/cleverly designed house

As opposed to (28) and (29), an equally large class of "inherent
accomplishment" verbs does prompt adjunctless passives, however.

(30)a The house was destroyed (yesterday).
    b The soldiers were shot.
   c The resistance was broken.

For G/V's account of the distribution in (28), (29), and (30)
(which I will not dispute here) see (18).
   Let us, however, assume two structural types of direct objects:
one where reference to the direct object NP is a prerequisite to
arriving at a semantically satisfactory reading of the simple verb;
and a second one, where reference to the object-NP is at much lar-
ger variance and, consequently, is no requirement for a semantical-
ly satisfactory reading of the simple verb. See (31a,b) for the
structural distinction.

(31)a for "inherent accomplishments" like _destroy_, _kill_, _arrest_,
       and _break_:

$$V^1$$
```
      V¹
      |
   ┌──┴──┐
   V⁰    NP
```
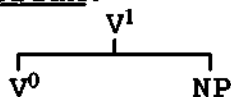
    b for "constructional accomplishments"
```
      V⁰
      |
   ┌──┴──┐
   V⁰    NP
```
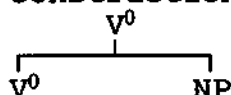
An NP of the type in (31b) will not be as independent structurally (and distributionally) as an NP in (31a).

Given (31a,b), another type of data receives a ready account. Note that idiom-like verbal complexes (such as <u>kick the bucket</u>, <u>hit the sack</u>, <u>hold a position</u>; <u>make a statement</u> - the latter two are distinguished as <u>Funktionsverben</u> in the traditional grammar of German) disallow passivation, or they allow it only under specific restrictions. It is plausible to assume for them, on purely semantic grounds, a structure such as in (31b), since the information collected by the complex [NP + V] is carried essentially by the NP (in the case of the metaphors or idioms just as well as with <u>Funktionsverbausdrücke</u>).

It is to be noted that the structural distinction in (31a,b) can accommodate an extended set of diverse data, and, simultaneously, that it offers an account for the distribution distinguishing "constructional" and "inherent" accomplishments. Cf. (28)-(30) above. In 6.5. we will extend the empirical observations under one unified perspective and address new facts.

6.5. <u>Definiteness effects and the syntactic status of the rhema</u>.

The account offered in 6.4. is incomplete to the extent that as it provides no explanation for the grammaticalizing effect of the adjunct. Cf. again (29) as opposed to (28). The question is thus: What do adjuncts do for passives of "constructional" accomplishment verbs that they need not do for "inherent" ones, under the structural assumption of (31) above?

My assumption is that the observed distinction has to do with the degree of semantic satisfaction provided for the position of the discourse function of <u>rhema</u> as opposed to that of the <u>thema</u>. See (32) as an illustration of what is meant by this distinction. We shall have to turn to German since in this language the <u>thema-rhema</u> distinction is borne out more clearly in terms of structural constraints while, at the same time, allowing for a considerable degree of linear variation such that discourse functions are reflected by word order. Note that the grammatical (default) accent (<u>GA</u>) within a sentence is always on the object-NP or PP immediately preceding V-last, or else on V-last in the case that there is no PP or object-NP. Within NPs, the rightmost N (constructional head) carries the grammatical accent. By common assumption, the default accent together with the basic word order distribution signals the grammatically organized <u>rhematic</u> (or non-thematic) information in the sentence. Take <u>bauen</u> "build", one of G/V's class representations.

(32) a ?Das Haus   wurde   (heute) GEBAUT ... <u>grammatical</u> accent GA
         the house became today built   (<u>GA</u>)
     b ˙Ein Haus   wurde (heute) GEBAUT   .....   (<u>GA</u>)
          house became today built
     c ??Das HAUS wurde (heute) gebaut ..... <u>contrastive</u>
                                                         accent (CA)
     d DIESES Haus wurde (heute) gebaut   ...   CA
         this   house became today built
     e Ein HAUS wurde (heute) gebaut .....   CA
     f Es wurde (heute) ein HAUS gebaut ..   <u>GA</u>
     g ˙Es wurde ein Haus GEBAUT   ..   CA
         "A house was built (today)" .... presentative (= rhema-
                                            tic) information

Note that the adjunct <u>heute</u> "today" has no grammaticalizing effect, nor does it carry default stress. Let us now turn to

<u>zerstören</u> "destroy", which behaves differently according to G/V's observation. Accordingly, their account is different, too. Our examples, however, show that it is not the verbal class that motivates the distributional distinctions, but definiteness efferts together with a uniform focus position.

(33)a Die Brücke wurde zerstört ......   <u>GA</u>
       the bridge became destroyed
    b ˙Eine Brücke wurde ZERSTÖRT .....   <u>GA</u>
    c Die BRÜCKE wurde zerstört   ..   CA
    d DIESE Brücke wurde zerstört   ...   CA
    e Eine BRÜCKE wurde zerstört   ...   CA
    f Es wurde eine BRÜCKE zerstört ...   <u>GA</u>
    g ˙Es wurde eine Brücke ZERSTÖRT ..   CA

The distribution is obvious. Indefinite subjects are allowed only in presentative sentences (subject in rhema position, i.e. left-adjacent to V-last, where it receives GA), as in the (f)-versions, or else with unchanged linear order under CA, as in the (e)-versions. Indefinites are <u>deictic</u> <u>rhemata</u>. They can only be tolerated in canonical rhematic positions (left-adjacent to the verb and thus under <u>GA</u>), or under contrastive stress (<u>CA</u>) in other positions.

Now note the only two versions distinct between (32) and (33), namely (a) and (c). Our assumption is that the differences in the (a,c)-versions are taken care of by the structural distinction in (31a,b) <u>bauen</u> "build" being a relational verb as opposed to <u>zerstören</u> "destroy", an absolute verb. No adjunct influence is at play.

In Abraham (1988b) it has been demonstrated in some detail what the parametric variation between rhematic structures in English, German, and Dutch is like. The parametric differences are induced by the fact that the V-second/V-last structure of the sentence (opening the "middle field") in German and Dutch leaves more room for a discourse-functional structure of the sort that the distinction between <u>thema</u> and <u>rhema</u> information presupposes. Suffice it to say here that the observed obligatory adjunct information required for "weak" (or relational) verbs as well as idiomatic verbal complexes appear to be a remnant of this information structure, which became gradually suppressed along with the emergence of the fixed SVO-structure in late Middle English. In other words, the adjuncts postulated for English "weak" verbs fill an original incanonic rhematic position left-adjacency to our original, Germanic verb-last: [_+V°]. In the case of "inherent" accomplishment verbs the semantic <u>rhema</u> requirement is satisfied by the semantically satisfied verb alone.

6.6. <u>Grammatical vs. contrastive stress</u>
The conclusions drawn in 6.5. carry over directly to the present observations. What contrastive stress does is open a contextual variable of identical formal structure constrained by a semantics of oppositeness. A prenominal PPP by default carries no stress If it does, however, a variable in the identical prenominal position is implicated in the semantic relation of oppositeness. Cf. (34) with inherent accomplishment verbs as distinct from (35) with "constructional" accomplishments.

(34)a the arrested MAN/hidden SOLUTION   ... grammatical (default)
                                               accent (<u>GA</u>)
     b the ARRESTED man/HIDDEN solution .... contrastive stress
                                                (CA)

(35)a   a ˙built HOUSE/˙written PAPER/˙held BELIEF   ....   <u>GA</u>
    b   a ˙BUILT house/WRITTEN paper/˙HELD belief   ....   CA

The grammaticality estimations are those by G/V (1989). See the
irregularity in (35b) between <u>built/held</u> and <u>written</u>. Other
examples betraying unsystematic heuristic validations are (again
G/V's judgments): ^{??}<u>a loved man</u>; ?<u>the destroyed house</u>; [?]<u>the killed
chicken</u>, [?]<u>the admired/respected man</u>, [?]<u>the understood solution</u>, [?]<u>the
constructed example</u>, [?]<u>the painted wall</u> (G/V 1989a,b).

The heuristically difficult status has presumably several sour-
ces. One is that the verbs in the prenominal position as above are
not terminative (<u>loved</u>, <u>admired</u>, <u>respected</u>). Their PPPs have to be
made resultative, in this attributive function, by virtue of a re-
sult-implying, or adjective-selecting, adjunct. Another reason is
the concealed stress ambiguity. Note that it is easy to render
grammatical <u>a WRITTEN paper</u> on the basis of such paradigmatic op-
posites as <u>read</u>, <u>oral</u>, <u>copied</u>. But it is much harder to legitimize
<u>built</u> in (35b). Note further that <u>a built house</u> gives rise to a
feeling of pleonasm, with <u>house</u> necessarily presupposing <u>built.</u>
Finally, and probably foremost, the verbal adjective in prenominal
position is by far not as canonical in English as it is in SOV-
languages. The main argument in support of this conclusion is the
fact that the verbal preterite participle (PP) in English has lost
almost all of its government properties. Compare English and German
(Dutch siding fully with German).

(36)   der durch den seiner   Frau geschenkten Gaul vor 2 Jahren
        ˙the by   the (to)his wife presented   horse 2 years ago
        getretene Mann
        kicked   man
        "the man kicked 2 years ago by the horse which he had given
        to his wife"

German and Dutch preserve the full sentential structure under
canonical leftwand-government of the verb irrespective of its PP-
form. In English, this government relation is severely pruned. This
permits the conclusion that prenominal PPs in English are not open
to clear grammatically based evaluations.

7.   <u>Conclusion</u>
The main goal of this paper was to show to which extent syntacti-
cally motivated verb classes and their distributional properties
(see above all G/V's data in section 4) correlate with, and can be
explained by, aspectual (or Aktionsart) distinctions. This is what
we have called, at the outset of this paper, the interface between
the semantic event structure and the syntactic agreement structure.
We tried to show that the "obligatory adjunct restriction" postu-
lated by Grimshaw/Vikner (1989a,b), while essentially correct, does
not provide a unique account for what is a heterogeneous set of
data. Methodologically we have become aware of the restrictions
characterizing English with respect to distinctions such as adjec-
tival vs. event passive, morphological elements of word-formation
expressions (affix, case) resulting in resultativeness and, conse-
quently, ergativeness, and the left-ward government properties of
verbals with directional PPs.

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